

REMARKS/ARGUMENTS

Claims 1 and 8 have been amended as described below.

The rejection of claims 1 – 5, 8, 14, 16, and 17 as being anticipated by Suzuki under 35 U.S.C. § 102(b), and the rejection of claim 15 as unpatentable over Suzuki under 35 U.S.C. § 103(a) are traversed. Respectfully, the Examiner does not appear to understand that the Suzuki cams (as well as the Ebbinghaus et al. cams, as discussed below) are not bearer rings, and perhaps more fundamental, they are not formed of the material of the cam shaft tube. To perhaps better emphasize this distinction, claims 1 has been amended to describe the shaft tube as being expanded in defined regions to form hollow cams from the material of the tube and the bearer rings as being attached to the hollow tube cams. Claim 8 has been amended to describe the shaft as comprising regions of the tube defining hollow cams. The bearer rings are locked in place on these hollow shaft cams. Nothing even hinting at this is described by Suzuki.

From figures 1, 4, 11 and 12, it is not only clear that cams 3 of Suzuki are not formed from the shaft tube, but the Suzuki cams are not bearer rings and do not have an even wall thickness. The Suzuki cams are true cams which have an increased thickness at the protruding tip; see Fig. 4, cams 3 at the right hand side and right of numeral 2. The essential difference between the present invention and Suzuki '269 is that Suzuki still teaches to mount cams on a tube, while the invention only makes use of reinforcing rings mounted on cams formed out of the material of the tube.

This can also be seen from Fig. 5 of Suzuki, where cams 3a are located within retentions of tube 2a. Suzuki only teaches to expand the tube 2/2a in those regions, where no cams are located. In fact, the expansion of the tube according to Suzuki only serves to frictionally secure the cams between two protrusions. On the other hand according to the present invention, the bearer rings are secured on the cams formed out of the tube, two cams being separated by a retention within the tube.

It can be seen that the Examiner's position in section 6 of the office action cannot be supported. The space formed between the cams 3 and the tube 2 shown in figures 4 and 12 is only hollow between the cams. This hollow space is the part of

the tube that is expanded in order to secure the cams in neighboring positions. Within the cams there is almost no expansion, otherwise the securing effect of the expanded parts between the cams would not take place.


The difference can also be seen easily from Fig. 4 of Suzuki and Fig. 1 of the present invention. Suzuki teaches to form a regularly shaped tube after expansion. The tube has symmetrically expanded parts between the cams and other parts arranged thereon, whereas the tube according to the invention has an irregular shape due to the bulging out of cams 2 in some parts and having parts that have almost no expansion e.g. in the end sections and in the center part. The underlying idea is to reduce the mass of the eccentric cams by forming the cams out of the tube and not securing heavy weighted metal cams to the outside of the tube.

The rejection of claims 1 – 5, 8, 11, 12, and 17 as being anticipated by Ebbinghaus et al. under 35 U.S.C. § 102(b) is traversed. The remarks made above with respect to Suzuki are equally applicable with respect to Ebbinghaus et al. As can be easily seen from Figures 1, 2, 5, 6 and 7, the Ebbinghaus et al. cams are in the form of asymmetric rings secured to a regularly formed tube. It is true that the tube is expanded in certain regions, in particular where the cams are located, however, the expanded parts form even rings on the surface of the tube, and not cams. The Ebbinghaus et al. cams are not formed from the material of the shaft tube. The bearer rings of the invention are not cams but are for reinforcement.

Applicants believe the claims are in condition for allowance and respectfully solicit a Notice of Allowance.

A Petition for Extension of time is also enclosed.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Robert Berliner', is written over a large, loopy circular flourish.

Robert Berliner
Registration No. 20,121

Date: Oct. 19, 2004 ...
(213) 892-9237 (direct dial)